

CO-250 F

BETRIEBSANLEITUNG OPERATING INSTRUCTIONS



VERSION 14-11-2013

ENGLISH

Carbon Monoxide Detector – Model CO-250 F

Introduction

Thank you for purchasing the carbon monoxide alarm model CO-250 F. This is one single station alarm. Please take a few minutes to thoroughly read this user's guide and save for future reference.

IMPORTANT: Installation and maintenance only to be carried out by specialist !

What you should know about carbon monoxide (CO)

Carbon monoxide (CO) is a dangerous poison. It is a colourless, odourless and tasteless gas. CO gas is generated by combustion of carbonaceous materials, namely, when not enough oxygen is available.

This hazard can occur, for example, in open fireplaces, boilers, stoves and automobile exhaust. This toxin is bound in the blood where it prevents the transport of oxygen, which can cause death by suffocation. Everyone is susceptible but experts agree that unborn babies, pregnant women, senior citizens and people with heart or respiratory problems are especially vulnerable.

Initial carbon monoxide poisoning symptoms are similar to the flu with no fever and can include dizziness, severe headaches, nausea, vomiting and disorientation. If symptoms of carbon monoxide poisoning are experienced seek medical attention immediately. CO poisoning can be determined by a carboxyhaemoglobin test. The following symptoms are related to CARBON MONOXIDE POISONING and should be discussed with ALL members of the household:

- 1. Mild Exposure:** Slight headache, nausea, vomiting, fatigue (often described as "flu-like" symptoms).
- 2. Medium Exposure:** Severe throbbing headache, drowsiness, confusion, fast heart rate.
- 3. Extreme Exposure:** Unconsciousness, convulsions, cardiorespiratory failure, death.

Important information

Note that there are other hazards where the CO detector will not trigger an alarm, such as gas leaks, fires or explosions. A CO detector is no substitute for smoke, fire, heat or other gas detectors! More information is available on the Internet, e.g. on www.protector24.de. This device is intended for use within private housing. It is suitable neither for commercial or industrial applications nor for use on a recreational craft or commercial vessels.

This detector is intended to protect persons from the acute effects of carbon monoxide. It can not provide people with special medical properties complete security. If in doubt you should consult a physician.

Gas appliances / equipment should be installed by trained personnel only. Get the devices / equipment in good mechanical condition and have them checked regularly. The installation of the CO detector should not be used as a substitute for proper installation, use and maintenance of fuel-fired facilities, including appropriate ventilation and exhaust systems.

Danger CO Levels

Concentration of CO in Air (ppm = parts per million)

APPROXIMATE INHALATION TIME AND SYMPTOMS DEVELOPED

50 ppm	The maximum allowable concentration for continuous exposure for healthy adults in any 8-hour period.
200 ppm	Slight headache, fatigue, dizziness, nausea after 2-3 hours.
400 ppm	Frontal headaches within 1-2 hours, life threatening after 3 hours.
800 ppm	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2-3 hours.
1,600 ppm	Headache, dizziness and nausea within 20 minutes. Death within 1 hour.
3,200 ppm	Headache, dizziness and nausea within 5-10 minutes. Death within 25-30 minutes.
6,400 ppm	Headache, dizziness and nausea within 1-2 minutes. Death within 10-15 minutes.
12,800 ppm	Death within 1-3 minutes.

Your detector detects a threat only where it is installed. Carbon monoxide must reach detector in described level and time to start alarming.

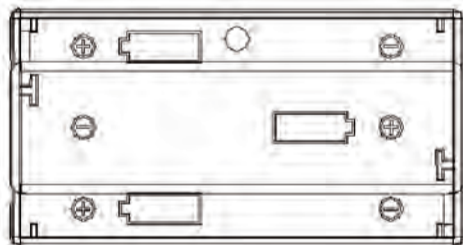
THIS CO ALARM MEETS THESE ALARM RESPONSE TIMES (As required in EN50291)
At 50 PPM, the unit must alarm within 60-90 minutes
At 100 PPM, the unit must alarm within 10-40 minutes
At 300 PPM, the unit must alarm within 3 minutes

Specifications:

Alarm Condition:	EN 50291: 2001 • Device type B
Sensor:	"FIGARO" Electrochemical carbon monoxide sensor
Power:	3 x 1.5V AA alkaline batteries
Temperature:	Operating range -10°C to 40°C
Humidity:	Operating range 10%-90% relative humidity.
Mounting:	Accessories supplied for wall mounting
Alarm:	85+ dB on 1m at 3.4 ± 0.5 KHz pulsing alarm
Test/Reset Button:	Test button verifies proper unit operation.
Accuracy of Digital Display:	30-999 ppm (±30%) when measured in condition of 20 °C (±5 °C). Atmosphere pressure ±10% and 40% (±5%) relative humidity. ø 119 mm x 37.5 mm/120 g without battery
Size & Weight:	
FIGARO Sensor Life Time:	six years from first powered on but no longer than seven years from production date printed on back side of unit.

QUICK SET UP

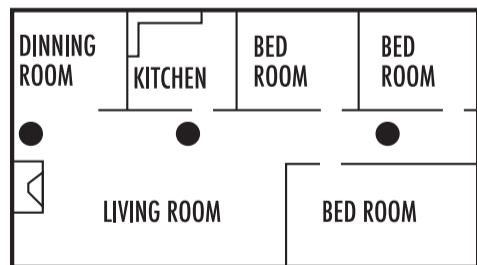
Install three AA batteries into the battery box. Observe the battery polarity markings at the bottom of the battery box.



Caution: Please do not press the test/reset button when you install the batteries!

INSTALLATION LOCATION:

IMPORTANT: THIS ALARM MUST BE MOUNTED ON A WALL. INSTALL ONLY AS DETAILED!



If you have only one detector, place it near sleeping areas, not near fuel burning appliances, such as fireplaces, furnaces or hot water heaters.

Where To Install Your CO Detector

- The following suggestions are intended to help you with the placement and installation of your CO detector.
- Place out of the reach of children. Under no circumstance should children be allowed to handle the CO detector.
 - Install in a bedroom or hallway located close to the sleeping area. Take special care to verify the alarm can be heard in sleeping areas.
 - It is recommended that a CO detector be installed on each level of a multilevel home.
 - Locate at least 5 feet away from all fuel burning appliances.
 - Placing at eye level (around 150cm-300cm from the floor) allows for optimum monitoring of the red and green indicator lights.
 - It is permissible to mount the detector on the height of bed in the bedroom or lay it on the bedside night table (CAUTION ! - please take into account the very loud alarm!)
 - In exceptional circumstances, the detector can be used as a portable device and take it where you want to detect a threat. The detector should move with caution. Moving the sensor can cause damage and void the warranty.

Where Not To Install Your CO Detector !

- * Do not install in kitchens, garages or furnace rooms that may expose the sensor to substances that could damage or contaminate it.
- * Do not install within 60 cm of heating or cooking appliances.
- * Do not install near vents, flues, chimneys or any forced/unforced air ventilation openings.
- * Do not install near ceiling fans, doors, windows or areas directly exposed to the weather.
- * Do not install in dead air spaces, such as peaks of vaulted ceilings or gabled roofs, where CO may not reach the sensor in time to provide early warning.
- * Do not install this unit near deep-cell large batteries. Large batteries have emissions that can cause the alarm to perform at less than optimum performance.
- * Do not obstruct the vents located on the alarm. Do not place the alarm where drapes, furniture or other objects block the flow of air to the vents.

Installation Instructions

Mounting

1. Using the template provided. Mark the position of the two mounting holes by using the template.
2. Drill two holes using a 6 mm drill for the plastic plugs supplied, (ensure you don't drill into the house wiring).
3. Screw the unit to the wall.

GB

These operating instructions are published by Protector GmbH, An den Kolonnen 37, 26160 Bad Zwischenahn, Germany

The operating instructions reflect the current technical specifications at time of print. We reserve the right to change the technical or physical specifications.



When setting up the device please inscribe the installation date on the attached label and affix it easily visible onto the CO detector (e.g. as shown on the adjoining figure) and replace the detector when

- 7 years have passed after installation date or
- "Er" is shown on the LC display



Operating and Alarm Characteristics

LC-DISPLAY	LCD DISPLAY SHOWS	ALARM SOUND	UNITS STATUS	RECOMMENDATION
257 PPM "For example"	A display of CO concentration from 30-999 ppm. Blue backlight is lighted. Red LED flashes.	4 quick beeps, Repeated every 5 seconds.	Concentrations of CO detected. Alarm condition.	Refer to "What to do When the Alarm Sounds".
888 PPM	Brief "888 ppm" for approximately 60 seconds. Blue backlight led is lighted for 60 seconds.	None. (beeps when install batteries is normal)	Self test when first powered up.	CO has not been detected. Numbers shown for test purpose only.
[Blank]	Display is blank. Green LED flashes every 20 seconds.	None.	Normal DC operation with good batteries. (now detecting CO)	None.
0 PPM	A steady display of "0 ppm". Blue backlight led is lighted for 20 seconds.	4 quick beeps.	Test/Reset button is pressed.	CO has not been detected. Numbers shown for test purpose only.
Lb	"Lb" displayed. Red LED flash every 20 seconds.	One quick beep every 20 seconds	Batteries need to be replaced.	Replace all three AA batteries immediately.
Err	"Err" displayed. Red LED flashes every 20 seconds.	Two quick beeps every 20 seconds.	Unit is Error condition.	Unit has malfunctioned. Replace immediately.
HHH	"HHH" displayed. Blue backlight is lighted. Red LED flashes.	4 quick beeps, Repeated every 5 seconds.	Concentrations of CO is more than 999 ppm.	MOVE TO FRESH AIR IMMEDIATELY!
End	"End" displayed. Red LED flashes every 20 seconds.	Two quick beeps every 20 seconds.	End of unit life. About 72 months from first powered on.	Replace unit immediately.

Test button

Press the Test button to check the proper operation of the device. You will hear 4 quick beeps, the red LED flashes 4 times and the green LED will light up for some seconds. The LC display will show the actual CO concentration. After some more seconds the unit will automatically return to normal operation.

Reset Feature

If the alarm is sounding, pressing the button will silence the alarm for about 5 minutes. After the duration, if the CO concentration is over 35ppm, the alarm will reactivate.

Battery Control

The detector is equipped with a battery monitoring. The batteries should be replaced as soon as possible when the LC display shows 'Lb' and the red LED flashes every 20 seconds accompanied by a quick beep tone.

Peak Level Memory

- (1) Press the test/reset button and hold for 5 seconds, it will display the highest CO concentration which have been detected by the detector since its last reset or powered.
- (2) Press the test/reset button and hold for 15 seconds, the memory of the CO level will be cleared. The detector will begin monitoring CO.



Caring for your Carbon Monoxide Detector

To keep your CO detector in good working order, you must follow these simple steps:

- Test the detector once a week by pressing the Test/Reset button
- Vacuum the detector cover once a month to remove accumulated dust. Use the soft brush attachment of your vacuum cleaner.
- Instruct children never to touch, unplug or otherwise interfere with the unit. Warn children of the dangers of CO poisoning.
- Never use detergents or solvents to clean the detector. Chemicals can permanently damage or temporarily contaminate the sensor.
- Avoid spraying air fresheners, hair spray, paint or other aerosols near the CO detector.
- Do not paint the CO detector. Paint will seal the vents and interfere with proper sensor operation.
- Do not mount the CO detector directly above or near a diaper pail, as high amounts of methane gas can cause temporary readings on the digital display.



What to do When the Alarm Sounds

- (1) Operate the Test/Reset button;
- (2) Call your emergency services;
- (3) Immediately move to fresh air - outdoors or by an open door/window. Do a head count to check that all persons are accounted for. Do not re-enter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.
- (4) After following steps 1-3, if the alarm reactivates within a 24 hour period, repeat steps 1-3 and call a qualified appliance technician to investigate sources of CO from fuel burning equipment and appliances, and to inspect for proper operation of equipment. If problems are identified during this inspection, have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturer's instructions, or contact the manufacturer's directly for more information about CO safety and the equipment. Make sure that motor vehicles are not, or have not been, operating in a garage attached or adjacent to the residence. If the alarm is sounding, pressing the test/reset button will terminate the alarm. If the CO condition that caused the alert in the first place continues, the alarm will reactivate. If the unit alarms again within five minutes, it is sensing high levels of CO which can quickly become a dangerous situation.

Note:

- (1) The batteries will usually last over 4 years in standby under normal conditions. An undepleted battery can power a unit in alarm for over 100 hours. The life will be reduced if the unit regularly goes into alarm or if it is exposed to excessive temperatures for long periods.
- (2) The Units can work for more than 6 years after first powered. The entire unit must then be replaced. It must also be replaced when the date is exceeded 7 years over the manufacture data which was marked on the back label of the unit.



Never carry out repairs yourself!

Warranty

2 years warranty from date of purchasing, on base of correct using.

The producer is not responsible for consequential damages which are effected directly or indirectly from this item.

Subject to change without prior notification. In the framework of product updates and device optimization, the contents may vary from the packaging specification.



SAFETY NOTES

Do not paint, decorate with foil or stickers, or cover the CO detector as this will impair its functioning.

Observe the maintenance schedules (see General Maintenance), otherwise the functioning may be impaired.

Avoid strong electromagnetic fields (mobile phones, wireless equipment, microwaves) as this will impair the functioning.

Danger of damage to hearing! The alarm sound is very loud. Do not test CO detector near your ears.

Danger of poisoning! Batteries are extremely dangerous if swallowed. Keep batteries and CO detector out of the reach of small children. If a battery has been swallowed see a doctor immediately.

Danger of explosion! Do not recharge, shorten or take batteries apart or throw into fire.

Do not let children play with the CO detector or its packaging material.

Make all household members familiar with the CO detector's functioning and its signals.

For reasons of safety and licensing (CE), unauthorised conversion and /or modification of the product is prohibited.

Do not take the product apart! There is a danger of lethal electric shock!

Do not leave packaging material lying about since plastic foils and pockets and polystyrene parts etc. could be lethal toys for children.

Handle the product with care - it is sensitive to bumps, knocks or falls even from low heights.

The warranty will be null and void in case of damages arising from violations of these operating instructions. We are not liable for consequential damages!

We accept no liability for material damages or injuries arising from inappropriate use or violation of the safety instructions. In such cases all warranty claims are null and void!